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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,770	03/26/2004	Patricia A. Morris	CL2218 US NA	9071

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EXAMINER	
RAMDHANIE, BOBBY	
ART UNIT	PAPER NUMBER
1774	

NOTIFICATION DATE	DELIVERY MODE
10/14/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-Legal.PRC@usa.dupont.com

Office Action Summary	Application No.	Applicant(s)	
	10/810,770	MORRIS ET AL.	
	Examiner	Art Unit	
	BOBBY RAMDHANIE	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 June 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20,22,25-27 and 29-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *20,22,25-27 and 29-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/17/2010 has been entered.

Response to Arguments

2. Applicant's arguments filed 06/17/2010 in regards to the Morris reference, have been fully considered but they are not persuasive. The following reasons are why.

3. Applicants admit on the record that Morris (WO02/33393) "does disclose, by structure and by name a variety of sensor materials to be used for gas analysis." Applicants argue 1). Morris does not however, teach or suggest the specific groups or materials recited in Claims 20; 2). None of the specific groups of materials recited in 20 are identically described in Morris as a whole group; 3). There is no discussion in Morris of which materials might possibly be grouped with which other materials for use to make a gas analyzer device; 4). Morris does not give the artisan sufficient guidance about the desirability of grouping any particular materials with certain others to justify classifying Morris as a reference that presents the artisan with a finite number of solutions from which to choose when constructing a group of materials to use in a gas analyzer device (See Remarks filed on 08/31/2009; Page 12 of 13)."

4. The Examiner respectfully disagrees.

5. The arguments of counsel cannot take place of evidence in the record (especially, since the prior art reference relied upon by the Examiner has a common inventor with the instant application). See MPEP 716.01(c) II.

6. Morris discloses the gas analyzer device (See Abstract; and Page 1 lines 8-15); wherein the gas analyzer device comprises a sensor array (See Figure 1, Figure 3, Page 4 lines 4-15; See Page 12 lines 13-20; Page 14 line 32 to Page 18 line 37; and Page 31 line 30 to Page 31 line 10), and wherein the sensor array may contain a group of (3, 4, **5**, **6**, 8, 10, 12, **or other desirable numbers of gas-sensing materials** (selected from the chemo/electro-active materials in the Morris reference; See Page 11 lines 29-33)).

7. The Examiner interprets these sections as giving sufficient and adequate knowledge to allow one of ordinary skill in the art, the knowledge and guidance of how to assemble applicants' alleged invention. Applicants' arguments are not supported by any scientific and factual evidence.

8. Applicant's arguments, see Remarks, filed 06/17/2010, with respect to Claim 34 have been fully considered and are persuasive. The rejection of 103(a) has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Morris et al. The means for limitations is being interpreted in view of 112 6th Paragraph.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 20, 22, 25-27, & 29-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Morris (WO02/33393).

11. The applied reference has a common assignee and inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

12. Applicants' claims are toward multiple devices.

13. Applicants' claims contain "means for." The "means for" limitations are being interpreted in view of 112 6th Paragraph.

14. Regarding Claims 20, 22, 25-27, & 29-48, Morris discloses the apparatus for analyzing a multi- component gas mixture (See Abstract; and Page 1 lines 8-15); comprising: A). An array of chemo/electro-active materials (See Figure 1 and Page 11;

lines 29-33, Figure 1, Figure 3, Page 4 lines 4-15; See Page 12 lines 13-20; Page 14 line 32 to Page 18 line 37; and Page 31 line 30 to Page 31 line 10), each chemo/electro-active material exhibiting a different electrical response characteristic, upon exposure at a selected temperature to the gas mixture, than each of the other chemo/electro-active materials; wherein at least four or six of the chemo/electro-active materials in the array comprise one of the following groups of four materials:

15. (i) the group of materials consisting of SnO_x, ZnO_x, $Nb_aTi_bO_x$, $Ni_aZn_bO_x$, $Ta_aTi_bO_x$, and $Ti_aZn_bO_x$; or

16. (ii) the group of materials consisting of SnO_x, ZnO_x, $Sb_aSn_bO_x$, $Ti_aZn_bO_x$, and $Ga_aTi_bZn_cO_x$; or

17. (iii) the group of materials consisting of SnO_x, ZnO_x, $Sb_aSn_bO_x$, $Ta_aTi_bO_x$, and $Ti_aZn_bO_x$; or

18. (iv) the group of materials consisting of SnO_x, ZnO_x, $Nb_aTi_bO_x$, $Sb_aSn_bO_x$, $Ta_aTi_bO_x$, $Ti_aZn_bO_x$, and $Ga_aTi_bZn_cO_x$; or

19. (v) the group of materials consisting of SnO_x, ZnO_x, $Al_aNi_bO_x$, $Mn_aY_bO_x$, $Nb_aW_bO_x$, $Ta_aTi_bO_x$, and $Nb_aSr_bTi_cO_x$; or

20. (vi) the group of materials consisting of Ce_aO_x, NbO_x, ZnO_x, $Nb_aTi_bO_x$, $Ni_aZn_bO_x$, and $Ti_aZn_bO_x$; or

21. (vii) the group of materials consisting of Ce_aO_x, NbO_x, ZnO_x, $Al_aNi_bO_x$, $Nb_aTi_bO_x$, and $Ta_aTi_bO_x$.

22. wherein a, b, and c are each independently about 0.0005 to about: 1: and wherein x is a number sufficient so that the oxygen present: balances the charges of the

other elements in the chemo/electro-active material (See Page 14 line 32 to Page 17 line 37; the chemo/electro-active materials are listed);

23. B) Means for determining an individual electrical response of each chemo/electro-active material upon exposure of the array to the gas mixture (See Page 4 lines 26-28 & Page 29; IR Thermographic Measurements & Claim 1): and

24. C). Means for obtaining from the individual electrical response of the chemo/electro-active (See Page 4 lines 29-36 Items C or D & Page 29; IR Thermographic Measurements & Claim 1).

25. Additional Disclosures Included: Claim 22: Wherein a chemo/electro-active material further comprises a (i) one or more additives to promote adhesion of a chemo/electro-active material to a substrate, or to alter the conductance, resistance or selectivity of a chemo/electro-active material; or that catalyze the oxidation of a gas of interest or promote selectivity for a particular analyte gas; and/or (ii) one or more dopants that convert an n semiconductor to a p semiconductor or vise versa (See Page 18 lines 1-29); Claim 25: An apparatus according to Claim 20 or 21 wherein component c). determines the presence or concentration of a nitrogen oxide and a hydrocarbon in the multi-component gas mixture (See Page 12; lines 13-30; Page 20 line 27, & Page 27 lines 16-26); Claim 26: Wherein component c). obtains a determination from gases in the gas mixture are not separated (See Rejection to Claim 25 & Page 20 lines 19-22); Claim 27: Wherein component b) determines electrical responses of the chemo/electro-active materials are determined upon exposure to only the multi-component gas mixture (See Page 4 lines 26-29 & Page 45 lines 1-4); Claim 29: Wherein the multi-component

gas mixture is emitted by a process, or is a product of a chemical reaction that is transmitted to a device, and wherein the apparatus further comprises means for utilizing the electrical responses for controlling the process or operation of the device (See Page 11 lines 9-24); Claim 30: A vehicle for transportation comprising an apparatus according to Claim 20 (See Page 11 lines 9-24); Claim 31: Equipment for construction, maintenance or industrial operations comprising an apparatus according to Claim 20 (See Page 11 lines 9-24); Claim 32: An apparatus according to Claim 20 further comprising heating means for separately heating each chemo/electro-active material (See Page 22 lines 24-28); Claim 33: An apparatus according to Claim 32 wherein each chemo/electro-active material is heated to the same temperature (See Page 22 lines 24-28); Claim 34: One or more chemo/electro-active materials has a different temperature than the other chemo/electro-active materials (See Rejection to claim 1; the device can be used in this manner); Claim 35: An apparatus according to Claim 20 wherein the chemo/electro-active materials are on a substrate made from a material selected from the group consisting of silicon, silicon carbide, silicon nitride, and alumina with a resistive dopant (See Page 14; lines 20-25); Claim 36: An apparatus according to Claim 20 wherein component c). obtains a determination as to the presence of concentration in the gas mixture of an organo-phosphorus gas (See Rejections to claim 1; the device is capable of being used in this manner); Claim 37: An apparatus according to Claim 20 which is characterized by a size such that it may be held in the human hand (See Page 27, Array Chip Fabrication); Claim 38: A ventilation system for a car or building comprising an apparatus according to both Claims 20 (See Page 11

lines 9-24); Claim 39: An apparatus according to Claim 20 wherein component c). determines the presence or concentration of a nitrogen oxide in the multi-component gas mixture (See above rejection to nitrogen oxide and See Page 12 lines 21-29 & Page 27 lines 16-26); Claim 40: An apparatus according to Claim 20 wherein component c). determines the presence or concentration of a hydrocarbon in the multi-component gas mixture (See above rejection to nitrogen oxide and See Page 12 lines 21-29 and Page 27 lines 16-26); Claim 41: An apparatus according to Claim 20 wherein component c). determines the presence or concentration of ammonia in the multi-component gas mixture (See above rejection to nitrogen oxide and Page 12 lines 21-29 and See Page 27 lines 16-26); Claim 42: The group of materials consisting of SnO_x, ZnO_x, $Nb_aTi_bO_x$, $Ni_aZn_bO_x$, $Ta_aTi_bO_x$, and $Ti_aZn_bO_x$ (See Page 16 line 1 to Page 17 line 8); Claim 43: The group of materials consisting of SnO_x, ZnO_x, $Sb_aSn_bO_x$, $Ti_aZn_bO_x$, and $Ga_aTi_bZn_cO_x$ (See Page 16 line 1 to Page 17 line 8); Claim 44: The group of materials consisting of SnO_x, ZnO_x, $Sb_aSn_bO_x$, $Ta_aTi_bO_x$, and $Ti_aZn_bO_x$ (See Page 16 line 1 to Page 17 line 8); Claim 45: The group of materials consisting of SnO_x, ZnO_x, $Nb_aTi_bO_x$, $Sb_aSn_bO_x$, $Ta_aTi_bO_x$, $Ti_aZn_bO_x$, and $Ga_aTi_bZn_cO_x$ (See Page 16 line 1 to Page 17 line 8); Claim 46: The group of materials consisting of SnO_x, ZnO_x, $Al_aNi_bO_x$, $Mn_aY_bO_x$, $Nb_aW_bO_x$, $Ta_aTi_bO_x$, and $Nb_aSr_bTi_cO_x$ (See Page 16 line 1 to Page 17 line 8); Claim 47: The group of materials consisting of Ce_aO_x, NbO_x, ZnO_x, $Nb_aTi_bO_x$, $Ni_aZn_bO_x$, and $Ti_aZn_bO_x$ (See Page 16 line 1 to Page 17 line 8); and Claim 48: The group of materials consisting of Ce_aO_x, NbO_x, ZnO_x, $Al_aNi_bO_x$, $Nb_aTi_bO_x$, and $Ta_aTi_bO_x$ (See Page 16 line 1 to Page 17 line 8).

Telephonic Inquiries

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BOBBY RAMDHANIE whose telephone number is (571)270-3240. The examiner can normally be reached on Mon-Fri 8-5 (Alt Fri off).

27. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

28. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

29. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bobby Ramdhanie/
Examiner, Art Unit 1774